



ASCE

ILLINOIS SECTION

NEWSLETTER

Vol. 37 No. 10

American Society of Civil Engineers

October 1996

IN THIS ISSUE

*Competitiveness Through
Technology & Cooperation*
Page 1, 2

*EE&WR Group Sponsors
Student Chapters*
Page 2

President's Notes
Page 3

ASCE Convention and CExpo
Page 4

ASCE Moving Toward the Future
Page 5

Section Activities
Page 6

ILLINOIS SECTION NEWSLETTER

Mailed to all ASCE-IS dues-paying members

American Society of Civil Engineers
Illinois Section — Zone III — District 8

Editor—Dave Kendall

Rust Environment and Infrastructure
3121 Butterfield Rd., Oak Brook, IL 60521
(630) 574-2568 FAX: (630) 574-2007

Assistant Editor—Janice Schultz

5029 N. Major, Chicago, IL 60630
Phone and FAX: (312) 282-3304

News Coordinator—Bob Camillone

Material & Guideway Systems Company
14409 Maycliff Dr., Orland Park, IL 60462
Phone: (708) 349-2790

Pres. John Carrato (312) 565-0450
Pres.-Elect Allen Staron (312) 902-7100
Sec. Richard Walther (708) 272-7400
Treas. Christopher Burke (708) 823-0500

Send change of address notices to the Secretary,
Illinois Section ASCE, 203 N. Wabash, Room
1000, Chicago, IL 60601; or call (312) 263-1606,
FAX (312) 372-5673.

**Submittal deadline
for the Nov. Newsletter
is Oct. 9, 1996**

Competitiveness Through Technology and Cooperation

The above is the theme for the 59th Annual Meeting of the American Power Conference, which will be held April 1-3, 1997, at the Chicago Marriott Downtown. The conference will have nine session tracks, with supporting presentations and activities. However, the theme is connective and reaches all disciplines and sectors of civil engineering and its affiliates.

An article was found that explains "competitive advantage" and its companion attributes from the November/December 1995 issue of the Journal of Management in Engineering, (p. 10-11).

Strategic Planning Pays Off

"Competitive advantage" might be an overused phrase in today's management literature, but for those firms that truly enjoy a competitive advantage, it means the difference between mediocre and outstanding financial results. "I have rarely heard an owner or senior manager state that his or her firm did not have some type of competitive advantage over its rivals," says Rick Sharpnack, a senior consultant in FMI Corp.'s Corporate Planning and Evaluations Group, Denver. By definition, for one firm to have an advantage, there must be other firms that are disadvantaged by comparison. "Is it that owners and top managers of A/E firms are eternal optimists," Sharpnack asks, "or is there a lack of understanding about the phrase 'competitive advantage'?"

To understand what competitive advantage means for engineering firms, Sharpnack believes that two questions must be answered. First,

how does a firm gain a competitive advantage over other firms in the marketplace? Second, what positive results can be expected from the actual competitive advantage and the planning process necessary to gain it?

Competitive advantages come in many different forms: superior quality and service, lower production costs, or long-term relationships with customers. The attributes that create the competitive advantages are also interrelated. For example, superior quality in consulting services may be an advantage depending on the ratio of additional cost to produce that service to the perceived value. The client, customer or owner must perceive that the additional value from those superior-quality consulting services more than offset the additional costs. That additional value must be created by a marketing plan that successfully differentiates your firm from the competition. Thus, superior-quality consulting services are a competitive advantage only if your engineering firm has a coordinated and well-conceived marketing plan. This plan should select customers and successfully communicate your firm's unique attributes. Furthermore, the firm should have strong operational policies and procedures to ensure the quality of these consulting services.

To identify what constitutes a competitive advantage, firms must look closely at the markets in which they operate and determine how they stack up against competitors.

(Continued on Page 2)

Competitiveness Through Technology and Cooperation

(Continued from Page 1)

According to Sharpnack, external market analyses, internal skills assessments, and subsequent planning to acquire and capitalize on competitive advantages are best accomplished through strategic planning.

Effective strategic planning is a rigorous and structured process, often necessitating an outside facilitator. By offering insight from prior experiences with other firms, outside facilitators can add value to the planning process by focusing on critical issues. . . . He points out that strategic planning is a process. A comprehensive strategic plan that incorporates feedback from people in the organization may take three to four months to finalize. If the plan identifies new markets to pursue, considerable market research needs to be done to ensure that they are viable markets. Senior management needs to examine whether the firm has the necessary resources to satisfy the customers in those new markets. Effective plans are rarely created during weekend retreats away from the office.

The result of the strategic planning process should be action plans that clearly identify strategies to be followed and measurable objectives to be tracked to accomplish stated goals. The action plans should identify specific dates for items to be completed and names of personnel responsible for making sure that items get completed.

Once the strategic plan is final, the hard work of implementing the plan begins. Effective implementation of strategic plans is often what separates "top-of-class" firms from all the others. Implementation efforts can fail for a number of reasons, including lack of commitment from senior management, unrealistic goals or poorly identified strategies, and a lack of vision for where the firm wants to be in the future. Often people in engineering firms say that they are just too busy with their current workload to get to the strategic planning implementation items — a self-fulfilling prophecy, Sharpnack insists. If people are not committed to expending the effort to implement a strategic plan, they will always be too busy with crisis management and trying to figure

out where the next billable project is coming from.

Sharpnack notes that firms that excel at developing and implementing strategic plans share many characteristics. These firms anticipate and embrace changing market conditions. They are the first to identify and penetrate new markets before other firms realize that their existing markets are declining. They enjoy superior financial results over longer periods of time than their poor-planning competitors. They are less subject to the ups and downs of normal economic cycles. Because their strategic vision is strong and clearly communicated throughout the organization, they tend to attract and keep high-performing people. Communication and teamwork are improved since everyone in the organization is pulling together to

accomplish the stated goals. Senior managers benefit from substantially less crisis management and have more time to perform planning functions.

"If your organization needs to create or improve a sustainable competitive advantage over your competitors, you should start by developing and implementing a well-thought-out strategic plan," Sharpnack advises. "You will be amazed by the additional benefits the strategic planning process produces."

If you have questions or interest in attending the American Power Conference, contact Robert W. Porter, APC Director, at (312) 567-3196, E-mail: apc@ece.iit.edu.

*Bob Camillone
Energy Committee Chair
Management Group*

EE&WR Group Sponsors Student Chapters

One of ASCE's goals is to provide leadership in civil engineering education through guidance that gives students the basic intellectual and organizational skills for successful careers. This not only includes supporting curricula strong in mathematics, science and the fundamentals of engineering, but also includes developing broad knowledge that provides for larger policy-setting and societal roles.

The Environmental Engineering and Water Resources (EE&WR) Group has been a major supporter of various ASCE student chapters. Two of these student chapters are at Northwestern University and the University of Illinois at Chicago.

The EE&WR Group, in partnership with the Northwestern University student chapter, started the Environmental Engineering Undergraduate Society, which helps students to learn more about how environmental engineering applies to life off campus and about student activities affiliated with ASCE. The EE&WR Group also contributes to the society's expenses. The partnering has resulted in an increase in ASCE student chapter membership, more student involvement in EE&WR Group activities and a renewed enthusiasm by students and professionals.

For the past three years, under-

graduate students at the University of Illinois at Chicago (UIC) have participated in an environmental design competition sponsored by New Mexico State University and the Waste-Management Education and Research Consortium. This competition is designed to provide potential solutions to real world environmental problems, bringing valuable experience to students and innovative ideas to industry.

The EE&WR Group was one of the sponsors of the UIC team for this competition. This year's team was the first from UIC to return with official recognition for their performance. Through the use of hard work and good ideas, the team was able to perform at a level that earned a Judges Choice Award for "The Team with the Most Versatility" in the form of a trophy and a \$500 cash award. The team gained hands-on experience, associated with environmental professionals, and achieved a high level of unity and cooperation.

The Group also sponsors a student award contest, as well as educational programs for minority students. The Group is continuously serving the ASCE members' and student chapters' needs to meet the challenges at the frontiers of developing technology and societal change.

*Jamil F. Bou-Saab, P.E.
Terra Engineering*

PRESIDENT'S NOTES

This has been a very rewarding year, and I thank you for the opportunity and honor to have served as President of the Illinois Section. I hope you agree that this year's Board of Directors, Technical Groups and Section Committees have taken strides to improve the value of your membership. Over the last three years, there have been major changes made in the Section with the intent of better understanding and servicing the needs of the membership. I extend my sincere thanks to all of the Officers and Chairs for their dedication and hard work this past year and to you for supporting ASCE and our profession.

Finally, I leave you with the following paragraphs:

"It is a generally conceded fact that the engineering profession on the whole is underpaid. . . . But it is when comparing the earnings of those who have reached the summit of their careers that the engineering profession makes the poorest showing. The leading lawyers, physicians



and surgeons demand and obtain large fees for their services, and there are many of them to be found in the great cities of America; but only a very few prominent engineers earn good salaries or large fees, and the amounts of their compensation fall far below those of the shining lights in the other professions. This

is all wrong, because no one has to study more faithfully for his degree or work harder in practice to attain success than the engineer. Moreover, none of the world's work is more important than his, for it is a generally acknowledged fact that the whole progress of humanity depends primarily upon his efforts.

"What is the reason for this unsatisfactory state of affairs, and upon whom lies the blame? . . . As for where the blame lies, . . . there is only one answer to the question, viz., upon the engineers themselves. If an engineer of good standing and education makes a practice of working for a mere pittance, is it likely that people will pay him more than he asks or is accustomed to accepting? Again, the unprofessional competition among engineers, that, alas, is by no means uncommon, is responsible to a great degree for the meagerness of technical men's compensation. Until engineers develop in themselves a love and respect for their profession and a desire to advance it by every legitimate means in their power, the existing unsatisfactory conditions will continue, and the day of good times for engineers in general will continue to remain in the dim and distant future."

These words were written by one of America's most renowned bridge engineers, J. Waddell, in 1916. I find the fact that what he wrote holds true 80 years later is, if not interesting, certainly pathetic. After reading this, if you are not actively trying to elevate the status of our profession, please start!

John Carrato

Project Coordination Engineer

- Position:** Project Coordination Engineer, job code #5142
- Department:** Division of Transportation
- Hours:** Full-time, Monday through Friday, 8 a.m.—4:30 p.m.
- Responsibilities:** Development and monitoring of details associated with a \$25 million road construction program. Typical duties may include: preparing intergovernmental agreements, monitoring permits, right-of-way status and other details required to bring projects to bid; representing the Division of Transportation at various project meetings.
- Requirements:** Completion of a Bachelor's degree in Civil Engineering, Urban Transportation Planning or a related field, and four years of experience in the highway transportation planning field including the demonstrated ability to coordinate the activities of multiple agencies; or an equivalent combination of training and experience.
- Starting Salary:** \$43,500-\$54,000 annually
- Contact:** DuPage County Personnel, Attn: Cara Perrone
421 N County Farm Road, Wheaton, IL 60187
Phone: (630) 682-7148 Fax: (630) 682-6990

Please include job code number with resume or application.
Applications will be accepted until the position is filled.

DuPage County is an Equal Opportunity Employer.

Careers Seminar Set for Oct. 11

The Urban Planning and Development Group of the Illinois Section, along with the ASCE student chapter at the University of Illinois at Chicago, are sponsoring a Civil Engineers Careers Seminar from 1 to 5:30 p.m. on Oct. 11, 1996. The seminar will be held in the Illinois Room (Room 321) at the Illinois Circle Center, 750 S. Halsted, University of Illinois at Chicago.

To reserve a spot, please call the UP&D Group, c/o Intercon Engineering, at (708) 895-0400 by Oct. 7. The seminar is directed at college juniors and seniors.

Symposium to Feature History of Civil Engineering

The ASCE will feature the "First National Civil Engineering History Symposium" at the Annual Convention and CExpo Nov. 10-15, 1996 at the Washington Hilton Hotel. ASCE is publishing the National History Proceedings for the papers prepared by experts in civil engineering history.

The National Symposium starts Nov. 10 with a 10:30 a.m. to 12 noon session for students, members and guests, with costume characters of young George Washington, the World's Oldest Civil Engineering Professor, and Emily Roebling and the Brooklyn Bridge. A 1 p.m. presentation will feature the Vision of the Monumental Core by the National Capital Planning Commission, followed by a National Landmarks bus tour to the Washington Monument, National Building

Museum, Great Falls National Park, and the Cabin John Aqueduct/Union Arch Bridge.

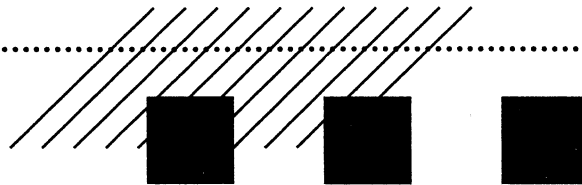
On Nov. 11, a session on "History for Today's Engineers" will involve presentations on the Smithsonian civil engineering collection, education, J.A. Waddell and bridges, and M.C. Meigs, the eclectic engineer.

On Nov. 12, sessions on the U.S. Capitol planning, construction and tour will be at the Russell Senate Office Building and co-sponsored by the U.S. Capitol Historical Society. Presentations include the new Federal City: 1791-1800, historic engineering surveys, construction of the U.S. Capitol extension, the Statue of Freedom, and the Corps of Engineers Building of the Nation's Capital. A tour of the U.S. Capitol and dome will highlight the Nov. 12 session.

On Nov. 13, the Annual History Breakfast will feature Benjamin Wright — American Pioneer Civil Engineer, followed by a session on sanitary engineers in the 19th and 20th centuries, state highway engineers and policy: 1920-1990, Federalism, Politics and Engineering Design, and the Corps Office of History. In the afternoon, events will include presentations by noted historian Frank Griggs, Jr., Henry Petroski, and Eric Delony summarizing the Historic American Engineering Record.

All civil engineers, students and guests are invited to the First National History Symposium. Contact ASCE Conferences & Publications at (800) 548-ASCE for registration and proceedings information.

UIC The University of Illinois
at Chicago



Off-Campus Graduate Engineering Program

accommodating working adults with evening classes at Chicago suburban locations

The University of Illinois at Chicago (UIC) ranks among the country's Research I institutions. We annually award approximately 200 PhD and 1,300 master's degrees. As part of its charter and the Great Cities program, we strive to serve the educational needs of the entire metropolitan area. The Off-Campus programs of the College of Engineering are accessible to working people living in the suburbs.

UIC's Off-Campus Programs offer graduate-level coursework in Civil Engineering, Electrical Engineering and Computer Science, and Mechanical Engineering. The classes, offered one evening per week, are particularly suited to working students. Students have the opportunity to obtain an advanced engineering degree in a program designed to fit their schedules.

Reasonable cost for quality programs has long been the standard for Illinois residents at the University of Illinois campuses.

Spring Semester 1997:	January 13 to May 9, 1997
CEMM 512	<i>Theory of Traffic Flow</i>
EECS 465	<i>Digital Networks</i>
EECS 480	<i>Database Systems</i>
EECS 532	<i>Advanced Digital Communications</i>
EECS 551	<i>Optimal Control</i>
ME 423	<i>Heat Exchangers</i>
ME 512	<i>Automatic Control of Mechanical Systems</i>
ME 521	<i>Heat Conduction</i>

File an application for admission: October 15, 1996 for degree admission November 15, 1996 for nondegree admission

Contact the Program Coordinator: Phone: 312/996-2311 Fax: 312/413-7950 E-mail: cmk-ob@uic.edu

8/96

Civil Engineers Are No Longer Boring

by Associated Press

LONDON — For decades, anybody who looked up “boring” in the London Yellow Pages was told to “see civil engineers.”

This prompted many jokes — or, rather, the same joke over and over again.

The Institution of Civil Engineers finally stopped laughing and lobbied for a new directory listing.

“It’s by no means that we have no

sense of humor, but after all these years, the story got a bit boring,” deputy secretary John Whitwell said.

The printers of the Yellow Pages caved in and agreed that future listings will say: “Boring: See sites exploration.”

The breakthrough was reported recently in the weekly trade journal *New Civil Engineer*.

“It’s official! Civil engineers are no longer boring,” the trade journal

exulted.

But the reputation may linger. Even within the engineering community, the trade publication *Tunnels and Tunneling* is widely known as “Bores and Boring.”

Unfair, says editor Mike Page.

“All tunneling involves boring, but I can assure you the people in the industry are not boring, socially speaking,” Page said.

MOVING TOWARD THE FUTURE

ASCE Poised To Go Beyond the Crossroad

ASCE's Board of Direction and members of the Society's National Committees gathered together for a Strategic Plan briefing in July. They reviewed and finalized the FY'97 Budget and took actions that further defined ASCE's relationship with the two pilot institutes: the Geolnstitute and the Structural Engineering Institute. It was a challenging session, but one that moved the Society significantly closer to strategic plan implementation.

September's issue of *ASCE News* discusses the Board meeting and the tough decisions that were made. The following material tackles the questions that preceded those decisions.

The planning process is nearly complete, and the first signs of plan implementation can already be seen. The following questions and answers address some of the complex issues involved in making the transition from current into Strategic Plan operations.

ASCE's Internal Reorganization

1. Why are educational and professional activities getting so little attention? What's going to happen to PAC, to Government Engineers?

Implementing Strategic Plan operations calls for restructuring some activities to make the Society more responsive to our members and our clients. For example, the functions currently performed by the Committee on Sections and District Councils will be handled on a pilot basis by the four ASCE Vice Presidents, working in conjunction with their Directors and the ASCE headquarters staff.

The objective is to provide more effective and efficient delivery of services to members, Sections, Branches, Student Chapters and others, not to cut back. EdAC and PAC are getting attention. Funding has been provided to both EdAC and PAC to conduct visioning activities similar to the one TAC did in winter '96.

The other committees of PAC will continue meeting during the year ahead. During the balance of FY '96-'97, PAC will conduct a visioning process that will help define how functions are performed by committees such as MADEX, Younger Members, the Committee on Equal Opportunity and the Government Engineers Division can best be performed in the years ahead.

In EdAC's case, both the Visioning effort and a special committee to implement the recommendations of the '95 education conference are underway. The outcomes of their work will determine the direction EdAC takes. In the meantime, activities of the Committee on Career Guidance and the Committee on Continuing Education are being deferred for one year. Portions of those activities that are high priority and must continue will be carried out by staff with oversight by the Education Activities Committee.

2. Will the Society's relocation and organization result in a loss of institutional memory, disrupting member service?

The nucleus of the staff has relocated with the Society. ASCE is maintaining member service while the relocation and reorganization

proceed. Most of the key managerial staff from New York has relocated to Reston, along with more than a third of the Membership Department staff. A great deal of the institutional memory resides with them. The Publications Division won't relocate until next year, and so as of this date has not been affected. In sum, approximately 44% of the New York staff remains with the Society.

A great deal of ASCE's institutional memory is also in computer files, which have now been effectively transferred from New York to Reston.

3. How will oversight of operations be managed during the Society's reorganization?

The Board will maintain its traditional role as the ultimate overseer of all Society operations, and the Executive Committee will continue to maintain close oversight of matters in the interim. COSOPO is establishing five teams — Strategy; Communications and Sections; Programs; Structure and Fiscal; and Board Development — which will oversee current operations and the transition process. Membership in COSOPO will include additional Board members, to provide close involvement of the Board with changes and smooth the transition to all-Board oversight of operations.

4. What steps are being taken to maintain the Society's financial soundness?

The Board has just approved the budget for FY '97 with a surplus that will be used to build our reserves. Each area of the Society has budget targets that will be monitored.

This article will be continued in future newsletters.

SECTION ACTIVITIES

Management Group

For information on the Management Group and its activities, contact Jeff O'Connor at (312) 454-1060.

Administration Meeting

Date: Thursday, Oct. 24, 1996

Time: 5:15 p.m.

Place: Collins Engineers, Inc.
165 N. Canal, Suite 975
Chicago

12th Annual Airport Conference

This year's conference is organized and sponsored by the Federal Aviation Administration, 2300 E. Devon Ave., Des Plaines, IL 60018.

Date: Oct. 29-30, 1996

Place: Rosemont, IL

RSVP: Carol Koenes at (847) 294-7013.

Geotechnical Group

Geotechnical Group meetings are held **every second Tuesday of the month**, September through May.

Time: 5:30 p.m. social
6:30 p.m. dinner
7:30 p.m. presentation

Place: Como Inn
546 N. Milwaukee, Chicago

Cost: \$25 with reservations, \$30 at the door, \$10 for students with reservations, \$15 for faculty with reservations.

RSVP: Ms. Pat Moser at (708) 717-4263 by noon on the preceding Thursday.

October Dinner Meeting

The guest speaker for October's dinner meeting will be Dr. Gonzalo Castro, president of GEI Consultants, Inc. in Winchester, Massachusetts. He will be speaking about "Empirical Methods in Liquefaction Evaluation." This is the topic of a paper he presented at the 1995 Pan American Conference held in Mexico City. Dr. Castro will present data from case histories where two empirical methods were used. He will point out the limitations of the methods, and explain their appropriate use. Dr. Castro is a provocative speaker, and his presentation will no doubt engage some lively discussion.

Date: Oct. 8, 1996

November Dinner Meeting

Speaker and topic to be announced.

Date: Nov. 12, 1996

Environmental Engineering & Water Resources Group

An HEC-RAS short course is scheduled for Oct. 30, 31 and Nov. 1, 1996. Mr. Richard Hayes of the COE will be the instructor.

An FEQ short course is being planned for this spring. The location, date, etc. are now being established. If you wish to have your name placed on a contact list when plans are finalized, call Dave Kendall at (708) 574-2568. A formal announcement of the course will also be included in future newsletters.

Plans for the WRPMD 25th special conference scheduled for June 6-11, 1998 are proceeding. Call the EE&WR Group chairperson if you are interested in participating in the planning of this national conference. The Nov. 12, 1996 EE&WR meeting will focus on planning activities for this conference.

We will not have an EE&WR meeting in October. See you all instead at the Illinois Section Annual Dinner Meeting. The next EE&WR Group meeting will be:

Date: Nov. 12, 1996

Time: 5:30 p.m.

Place: River Center
Main floor conference room
111 N. Canal St., Chicago

RSVP: Dave Kendall at (708) 574-2568 or Dave Moughton at (312) 353-6400.

Urban Planning & Development Group

The UP&D Group is preparing the "Roundtable" Seminar agenda for developers, municipal planners, public works officials, and consulting civil engineers that is scheduled for Oct. 31, 1996. The pros and cons of the development process will be discussed. Your ideas are welcomed at our next breakfast meeting. Please contact John Zimmermann at (847) 698-6400 for details.

Group meetings are held every third Thursday of the month. The back room at Denny's restaurant has been reserved for the Group. Our next scheduled meeting is:

Date: Nov. 21, 1996

Time: 8:15 a.m.

Place: Denny's Restaurant
Oakbrook Terrace

Structural Group

The Structural Group will not have an October dinner meeting since the Illinois Section's 80th Annual Dinner Meeting will be held on Oct. 16. We look forward to seeing you at the Annual Dinner Meeting. For November meeting information, look for details in the next newsletter.

Great Lakes Regional Conference in Chicago

The Great Lakes Regional Conference, titled "Partnering for Progress in the 21st Century," will be hosted by the Society of American Military Engineers, Chicago Post, on Oct. 23-25, 1996. The conference will be held at the Midland Hotel, 172 W. Adams, Chicago.

The program includes an ice-breaker at the new Navy Pier Crystal Gardens; keynote speakers include Major General Stanley O. Genega, Major General (Retired) James E. McCarthy, Rear Admiral Patricia A. Tracy and Colonel James R. Van Epps; and technical sessions in the areas of infrastructure, professional development, technology integration, and environment. Registration materials can be received by calling Mr. Ronald Youngblood, P.E., at (312) 693-3809.

Engineering Design Manager

The City of Fort Lauderdale, Florida, is seeking qualified applicants for the position of Engineering Design Manager.

The salary for this position is \$45,468.80 - \$64,230.40 annually.

This position involves the design of a wide variety of municipal public works and utilities operation projects and the supervision of a major engineering work group, or the review of private development projects.

Applications and formal requests for applications will be accepted and received at the Personnel Division, City Hall, 100 N. Andrews Ave., 3rd Floor, Fort Lauderdale, FL, continuously until sufficient applications are received. If you need additional information, call Sharon Liebowitz at (954) 761-5306.